Exelon Generation Company, LLC
LaSalle County Station
2601 North 21st Road
Marseilles, IL 61341-9757

www.exeloncorp.com

Exelon Nuclear

May 25, 2001

10 CFR 50.73

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

LaSalle County Station, Unit 2
Facility Operating License No. NPF-18
NRC Docket No. 50-374

Subject: Licensee Event Report

In accordance with 10 CFR 50.73(a)(2)(iv)(A), Exelon Generation Company, (EGC), LLC, is submitting Licensee Event Report Number 01-001-00, Docket No. 050-374.

Should you have any questions concerning this letter, please contact Mr. William Riffer, Regulatory Assurance Manager, at (815) 357-6761, extension 2383.

Respectfully,

Charles G. Pardee
Site Vice President
LaSalle County Station

Attachments: Licensee Event Report
Attachment A – Regulatory Commitment

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - LaSalle County Station

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Attachment A
Regulatory Commitment

Exelon Generation Company (EGC), LLC, is committing to the following actions. Any other actions discussed in this submittal represent intended or planned actions by EGC. They are described to the NRC for the NRC's information and are not regulatory commitments.

Regulatory Commitment(s)	*Tracking Number*
The Exelon Nuclear Conduct of Maintenance Manual, O.5, Maintenance Risk Assessment, will be revised to require an evaluation of the risk to the plant for maintenance activities that involve work on an energized circuit with the potential to create a fault in the circuit.	ATM# 49049

NRC FORM 366 (1-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and by internet e:mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NOEB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1):	DOCKET NUMBER (2)	PAGE (3)
LaSalle County Station, Unit 2	05000374	1 of 3

TITLE (4) Reactor Scram due to Blown Fuse in Feedwater Control System During Maintenance

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
04	06	01	01	- 001 -	00	05	25	01	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)

☐ 20.2201(b)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2201(d)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(1)	☐ 50.36(c)(1)(i)(A)	☒ 50.73(a)(2)(iv)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(I)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ OTHER
☐ 20.2203(a)(2)(iii)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC From 366A
☐ 20.2203(a)(2)(iv)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	
☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(viii)(A)	
☐ 20.2203(a)(3)(I)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(B)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Pat Allen, Maintenance Work Analyst	(815) 357-6761 Extension 2547

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	☒ NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines)(16)

At 0909 hours on April 6, 2001, LaSalle County Station, Unit 2 automatically scrammed from 100 percent power due to a blown fuse in the feedwater (FW) control system that occurred during maintenance. The blown fuse resulted in multiple failures in the FW control logic, and caused both Reactor Recirculation (RR) pumps to downshift to slow speed. The FW control failures and the level swell from the RR pump downshifts caused a high reactor water level, and the main turbine stop valves to close. This caused an automatic reactor scram due to turbine stop valve closure with reactor power above 25 percent power.

The root cause of this event was an inadequate maintenance risk assessment performed for the work. The corrective action to prevent recurrence is to revise the Exelon Nuclear Conduct of Maintenance Manual, 0.5, Maintenance Risk Assessment, to require an evaluation of the risk to the plant for maintenance activities that involve work on an energized circuit with the potential to create a fault in the circuit.

The safety consequences of this event were minimal. A RR pump trip, a turbine generator trip, and a loss of FW flow are analyzed conditions of moderate frequency (Updated Final Safety Analysis Report (UFSAR) Chapter 15). The plant responded as described in the referenced UFSAR Chapter. The reactor was safely shut down and recovery performed without incident.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
LaSalle County Station, Unit 2	05000374	01	– 001 –	00	2 of 3

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

PLANT AND SYSTEM Identification

General Electric - Boiling Water Reactor, 3489 Megawatts Thermal Rated Core Power

A. CONDITION PRIOR TO EVENT

Unit(s): 2 Event Date: 04/06/01 Event Time: 0909 Hours
Reactor Mode(s): 1 Power Level(s): 100
Mode(s) Name: Run

B. DESCRIPTION OF EVENT

Prior to the event, Maintenance was performing a diagnostic test (flowscan) on 2FW146, Motor Driven Feedwater Pump (MDRFP)[SJ] Low Flow Feed Regulating Valve. The MDRFP was not in operation, and the valve was manually isolated to allow valve movement without affecting the feedwater system flow paths. In order to perform the flowscan test, leads were lifted locally at the valve to provide signal paths for the flowscan computer. When the valve was cycled, one of the leads came into contact with the cam mechanism inside the valve position unit mounted on the valve. While the lead was taped, it made contact with a screw on the rear of the cam (evidence of an electrical arc was found on the screw). The most probable cause for the lead contacting the screw is inadequate taping of the lead. This caused a short circuit in the feedwater control logic, which caused fuse 2C34A-F7 to blow.

As a result, at 0909 hours on April 6, 2001, LaSalle County Station, Unit 2 experienced an automatic RPS [JC] actuation (SCRAM) from 100 percent power. The blown fuse caused multiple failures in the feedwater (FW)[JB] control logic, and caused both Reactor Recirculation (RR)[AD] pumps to downshift to slow speed on a false Level 3 signal. The resultant feedwater control failures, and the level swell from the recirculation pump downshifts caused reactor water level to reach the Level 8 setpoint (plus 55 inches). The Main Turbine (TG)[TA] tripped on high reactor water level. When the main turbine tripped, it caused the main turbine stop valves to close. This caused an automatic RPS actuation due to turbine stop valve closure with reactor power above 25 percent power.

Both Turbine Driven Reactor Feedwater (TDRFP)[SJ] pumps tripped due to high reactor water level. As a result of the blown fuse, the feed regulating valve would not open to allow the MDRFP to inject water into the reactor coolant system. The reactor operator (RO) chose to manually start the Reactor Core Isolation Cooling (RCIC)[BN] system to recover water level after the TDRFP trip. When placed in automatic, the RCIC system instrumentation indicated a slight frequency oscillation. The RO placed the RCIC system back in manual and the system performed normally for the remainder of the time in service. Normal reactor water level was obtained at 0931 hours.

This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in an automatic actuation of the reactor protection system.

C. CAUSE OF EVENT

The root cause of this event was an inadequate maintenance risk assessment performed for the work. The responsible personnel failed to perform an adequate risk assessment by not identifying that lifting leads created the risk of a short which could lead to a reactor scram. Specifically, the risk assessment for working on energized equipment only focused on the personnel safety risks. The assessment did not address what could happen if one of the leads being manipulated was inadvertently shorted or the impact of a power failure in the FW control system. An additional causal factor in this event was the lack of an independent fuse for the power feeding this valve.

D. SAFETY ANALYSIS

The safety consequences of this event were minimal. A RR pump trip, a TG trip, and a loss of FW flow are analyzed conditions of moderate frequency (Updated Final Safety Analysis Report (UFSAR) Chapter 15). The plant responded as described in the referenced UFSAR chapter. The reactor was safely shut down and recovery performed without incident. There were no safety system functional failures. This event would not be more severe under alternative conditions.

E. CORRECTIVE ACTIONS

1. The lifted leads were relanded, and fuse 2C34A-F7 was replaced.

2. The immediate corrective action established a policy to strengthen the use of Maintenance Risk Assessments by including a description of potential plant/system effects if a lead to be lifted is shorted. The policy was further explained by stating that every work task performed which requires lifting energized leads will specify in the column "RISK" on the Maintenance Risk Assessment form the lifted lead and its associated impact if it were to short.

Corrective Action to Prevent Recurrence:

3. The Exelon Nuclear Conduct of Maintenance Manual, O.5, Maintenance Risk Assessment, will be revised to require an evaluation of the risk to the plant for maintenance activities that involve work on an energized circuit with the potential to create a fault in the circuit. (ATM# 49049)

F. PREVIOUS OCCURRENCES

A review of Licensee Event Reports over the previous five years found no previous or similar occurrences.

G. COMPONENT FAILURE DATA

Since no component failure occurred, this section is not applicable.